



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0455.1US	SERIAL NO. 10/791,244
	APPLICANT Yang et al.	
	FILING DATE March 2, 2004	GROUP 2611

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/JATM/		5,412,620	05/1995	Cafarella et al.			
		5,487,069	01/1996	O'Sullivan et al.			
		5,559,757	09/1996	Catipovic et al.			
		5,577,066	11/1996	Schuchman et al.			
		5,612,978	03/1997	Blanchard et al.			
		5,805,638	09/1998	Liew			
		5,818,868	10/1998	Gaudenzi et al.			
		5,828,658	10/1998	Ottersten et al.			
		5,930,369	7/1999	Cox et al.			
		6,047,020	04/2000	Hottinen			
		6,097,753	08/2000	Ko			
		6,128,276	10/2000	Agee			
		6,137,848	10/2000	Chennakeshu et al.			
		6,141,393	10/2000	Thomas et al.			
		6,144,711	11/2000	Raleigh et al.			
		6,181,714	01/2001	Isaksson et al.			
		6,188,717	02/2001	Kaiser et al.			
		6,219,561	04/2001	Raleigh			
		6,289,005	09/2001	Katz			
		6,321,066	11/2001	Katz et al.			
		6,321,082	11/2001	Katz			
		6,320,903	11/2001	Isaksson et al.			
		6,359,926	03/2002	Isaksson et al.			
		6,359,938	03/2002	Keevill et al.			
/JATM/		6,363,128	03/2002	Isaksson et al.			

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/JATM/	6,366,554	04/2002	Isaksson et al.			26
	6,377,632	04/2002	Paulraj et al.			27
	6,392,595	05/2002	Katz et al.			28
	6,396,801	05/2002	Upton et al.			29
	6,438,174	08/2002	Isaksson et al.			30
	6,445,342	09/2002	Thomas et al.			31
	6,456,649	09/2002	Isaksson et al.			32
	6,466,629	10/2002	Isaksson et al.			33
	6,473,449	10/2002	Cafarella et al.			34
	6,473,453	10/2002	Wilkinson			35
	6,493,395	12/2002	Isaksson et al.			36
	6,505,053	01/2003	Winters et al.			37
	6,512,737	01/2003	Agee			38
	6,538,986	03/2003	Isaksson et al.			39
	6,553,012	04/2003	Katz			40
	6,611,855	08/2003	Hellberg et al.			41
	6,618,431	09/2003	Lee			42
	6,643,526	11/2003	Katz			43
	6,658,619	12/2003	Chen			44
	6,680,969	01/2004	Molnar et al.			45
	6,662,024	12/2003	Walton et al.			46
	6,671,334	12/2003	Kuntz et al.			47
	6,674,795	01/2004	Liu et al.			48
	6,684,065	01/2004	Bult et al.			49
	6,693,953	02/2004	Cox et al.			50
/JATM/	6,700,919	03/2004	Papasakellarios			51

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/JATM/	6,724,743	04/2004	Pigeonnat			52
	6,729,929	05/2004	Sayers et al.			53
	6,744,320	06/2004	Nguyen et al.			54
	6,745,352	06/2004	Cheng			55
	2002/0136158	09/2002	Frank			56
	2002/145989	10/2002	De Parthapratim et al.			57
	2003/0026201	02/2003	Arnesen			58
	2003/0035491	02/2003	Walton et al.			59
	2003/0043732	03/2003	Walton et al.			60
	2003/0043767	03/2003	Pan et al.			61
	2003/0043887	03/2003	Hudson			62
	2003/0043925	03/2003	Stopler et al.			63
	2003/0048856	03/2003	Ketchum et al.			64
	2003/0058952	03/2003	Webster et al.			65
	2003/0063557	04/2003	Mottier			66
	2003/0072291	04/2003	Brunel			67
	2003/0076908	04/2003	Huang et al.			68
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	2003/0081781	05/2003	Jensen et al.			70
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	2003/0108117	06/2003	Ketchum et al.			74
	2003/0112880	06/2003	Walton et al.			75
	2003/0123384	07/2003	Agee			76
/JATM/	2003/0125040	07/2003	Walton et al.			77

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/JATM/		2003/0128658	07/2003	Walton et al.				78
		2003/0129984	07/2003	Dent				79
		2003/0133403	07/2003	Castelain et al.				80
		2003/0147655	08/2003	Shattil				81
		2003/0152021	08/2003	Wang et al.				82
		2003/0165131	09/2003	Liang et al.				83
		2003/0185310	10/2003	Ketchum et al.				84
		2003/0210752	11/2003	Krupka				85
		2003/0215007	11/2003	Mottier				86
		2003/0216154	11/2003	Mennenga et al.				87
		2003/0227866	12/2003	Yamaguchi				88
		2003/0235255	12/2003	Ketchum et al.				89
		2004/0032354	02/2004	Knobel et al.				90
		2004/0032918	2/2004	Shor et al.				91
		2004/0052236	03/2004	Hwang et al.				92
		2004/0086027	05/2004	Shattil				93
		2004/0086035	05/2004	Upton et al.				94
		2004/0087275	05/2004	Sugar et al.				95
		2004/0095907	05/2004	Agee et al.				96
		2004/0100897	05/2004	Shattil				97
		2004/0101046	05/2004	Yang et al.				98
		2004/0116077	06/2004	Lee et al.				99
		2004/0120274	06/2004	Petre et al.				100
		2004/0120424	06/2004	Roberts				101
		2004/0136399	07/2004	Roberts				102
/JATM/		2004/0141548	07/2004	Shattil				103

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/JATM/		2004/0142663	07/2004	Roberts				
/JATM/		2004/0146024	07/2004	Li et al.				
/JATM/		2004/0240595	12/2004	Raphaeli				
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
/JATM/		0766468	04/1997	EP				
		1017183	07/2000	EP				
		1047209	10/2000	EP				
		1063780	12/2000	EP				
		1119146	07/2001	EP				
	*	1139602	10/2001	EP1139623				
		1175022	01/2002	EP				
		1255387	11/2002	EP				
		1289182	03/2003	EP				
		1300999	04/2003	EP				
		1303094	04/2003	EP				
		1357693	10/2003	EP				
		1365554	11/2003	EP				
		1379020	01/2004	EP				
		1411693	04/2004	EP				
	*	1992-0009249	05/1992	KR			X**	
	*	1998-702348	07/1998	KR			X**	
	*	20000027178	05/2000	KR			X**	
/JATM/	*	2003-0034260	05/2003	KR			X**	

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							YES	NO		
/JATM/		95/22859	08/1995	WO					126	
↓		95/27349	10/1995	WO					127	
		96/22638	07/1996	WO					128	
		97/34421	09/1997	WO					129	
		97/35384	09/1997	WO					130	
		97/48192	12/1997	WO				X	131	
		98/09395	03/1998	WO					132	
		98/10545	03/1998	WO					133	
		98/10549	03/1998	WO					134	
		98/10550	03/1998	WO					135	
		98/10552	03/1998	WO					136	
		98/10553	03/1998	WO					137	
		98/10554	03/1998	WO					138	
		98/10555	03/1998	WO					139	
		98/18272	04/1998	WO					140	
		98/36596	08/1998	WO					141	
		98/36598	08/1998	WO					142	
		98/36599	08/1998	WO					143	
		98/37638	08/1998	WO					144	
		99/49602	09/1999	WO					145	
		99/62280	12/1999	WO					146	
		00/11823	03/2000	WO					147	
		00/52872	09/2000	WO					148	
	↓		01/10065	02/2001	WO					149
	/JATM/		01/33761	05/2001	WO					150

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							YES	NO		
/JATM/		01/33791	05/2001	WO					151	
		01/47202	06/2001	WO					152	
		01/47203	06/2001	WO				X	153	
		01/53932	07/2001	WO					154	
		01/54300	07/2001	WO					155	
		01/54305	07/2001	WO					156	
		02/29977	04/2002	WO					157	
		02/054601	07/2002	WO					158	
		02/054537	07/2001	WO					159	
		02/061962	08/2002	WO					160	
		02/067527	08/2002	WO					161	
		02/073937	09/2002	WO					162	
		02/080483	10/2002	WO					163	
		WO/082683	10/2002	WO					164	
		02/082683	10/2002	WO					165	
		02/093779	11/2002	WO					166	
		02/093784	11/2002	WO					167	
		02/093819	11/2002	WO					168	
		03/005291	01/2003	WO					169	
		03/010898	02/2003	WO					170	
		03/015292	02/2003	WO					171	
		03/026237	03/2003	WO					172	
		03/028270	04/2003	WO					173	
		03/044983	05/2003	WO					174	
	/JATM/		03/081823	10/2003	WO					175

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							YES	NO	
/JATM/		03/084092	10/2003	WO					176
		03/092212	11/2003	WO					177
		2004/002047	12/2003	WO					178
		2004/003743	01/2004	WO					179
		2004/008704	01/2004	WO					180
		2004/023704	03/2004	WO					181
		2004/023704	03/2004	WO					182
		2004/032347	04/2004	WO					183
		2004/036345	04/2004	WO					184
		2004/038984	05/2004	WO					185
		2004/059935	07/2004	WO					186
/JATM/		2004/064298	07/2004	WO					187

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EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)	
/JATM/		"Fast Algorithm for Solving Toeplitz Systems of Equations"_IBM Technical Disclosure Bulletin, May 1980, US, Vol. 22. No. 12. 2 pages	188
	*	BENVENUTO, "Joint Detection with Low Computational Complexity for Hybrid TD-CDMA Systems," VTC 1999, Fall IEEE VS 50 th Vehicular Technology Conference, Volume 1, September 19-22, 1999, vol.1, pp. 618-622.	189
		BERETTA ET AL., "Space-Time multiuser detectors for TDD-UTRA". IEEE, Fall 2001.	190
		GOLUB ET AL., "Matrix Computations," 3 rd Edition, The Johns Hopkins University Press, Baltimore, MD, pp. 201-202, (1996).	191
/JATM/		GRAY, "Toeplitz and Circulant Matrices: A Review," available at http://ee.stanford.edu/~gray/toeplitz.pdf	192

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/JATM/		HAYKIN, "Adaptive Filter Theory", Third Edition, Prentice Hall, 1996, pp. 87-93,	193
↓		KAY, "Fundamentals of Statistical Signal Processing: Estimation Theory," Prentice Hall, New Jersey, XP002428399, (1993). pages 391-392	194
↓	.	MEYR ET AL., "Digital Communication Receivers: Synchronization, Channel Estimation, and Signal Processing," Wiley Interscience, New York, XP002428398, pp. 700-717 , 782-789, (1998). pages 700-717	195
↓		SINN ET AL., "Efficient Data Detection Algorithms in Single and Multi-Carrier Systems Without the Necessity of a Guard Period," page 2739, left-hand column, figure 2.	196
↓		SUN ET AL., "On the Convergence of the Inverses of Toeplitz Matrices and its Applications," IEEE Transactions on Information Theory, vol. 49, no. 1, pp.180-190, (January 2003).	197
↓		VOLLMER ET AL., "Comparative Study of Joint-Detection Techniques for TD-CDMA Based Mobile Radio Systems", IEEE Journal on Selected Areas in Communications, Vol. 19, No. 8, August 2001, pp. 1461-1475.	198
↓		VOLLMER ET AL., "Joint-Detection using Fast Fourier Transforms in TD-CDMA based Mobile Radio Systems". 1999 (XP-002190679)	199
↓		WILLIAMSON ET AL., "Block Decision Feedback Equalization," IEEE Transactions on Communications, IEEE Service Center, Piscataway, New Jersey, vol. 40, no. 2, pp. 255-264, (February 1, 1992).	200
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